

# Electronic Orders

## UNDERSTANDING PATHOLOGY ORDERING PROCESSES

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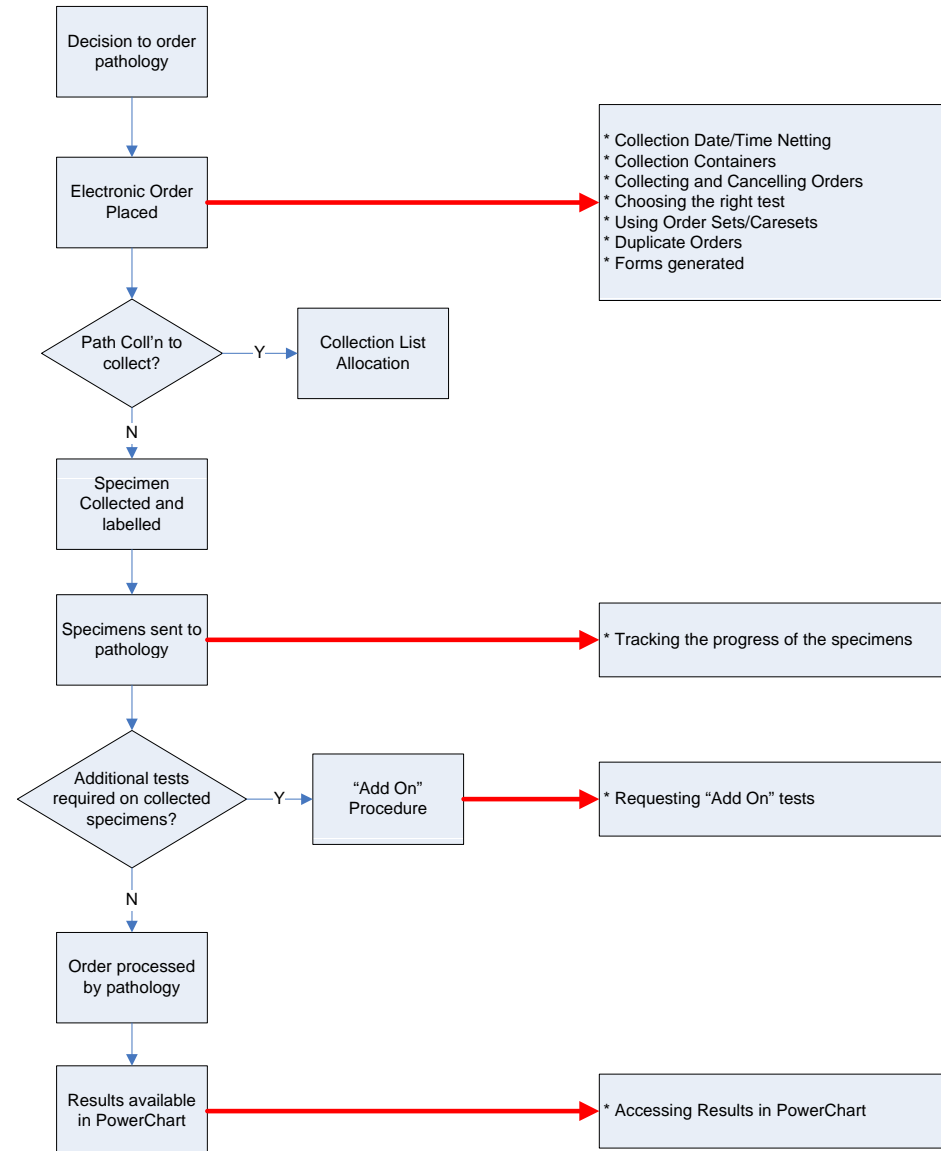
June 2010

**What is the pathology ordering process and what do I need to consider when placing an electronic order for pathology?**

# Western Pathology Cluster

## PathNet Millennium Implementation

### PATHOLOGY ORDERING WORKFLOW



### PATHOLOGY ORDERING CONSIDERATIONS

- \* Collection Date/Time Netting
- \* Collection Containers
- \* Collecting and Cancelling Orders
- \* Choosing the right test
- \* Using Order Sets/Caresets
- \* Duplicate Orders
- \* Forms generated

- \* Tracking the progress of the specimens

- \* Requesting "Add On" tests

- \* Accessing Results in PowerChart

# Today

- Review the process for ordering and discuss key considerations when training end users
- Highlight some tips and tricks for more difficult pathology ordering

# Western Pathology Cluster

## PathNet Millennium Implementation



## Placing an Electronic Order Collection Date and Time Netting

- Ensure that **same collection date and time is applied to all orders** when placing orders for multiple tests at the same time. This will allow “netting” to combine all tests that can be performed on the one sample.
- Otherwise the orders go to pathology several times, which results in specimens needing to be reprocessed several times or tests cancelled.
- **Highlight all orders to assign the same collection date and time. Make sure you choose today’s date, not one in the future.**

**Hint:** If Collection Netting does not occur, separate collection tubes will be required for every single order, even if they can be collected into the same tube

## Placing an Electronic Order

### Collection Date and Time Netting - EXAMPLE

Order = FBC, Monospot, EUC, LFTS, CMP

#### With D/T Netting

1 Accession Number for all tests  
1 Label for FBC and Monospot  
1 Label for EUC, LFTs, CMP

Specimen for EUC, LFT,  
CMP processed  
once

#### Without D/T Netting

4 Separate Accession Numbers -  
One for each test  
1 Label for every test (5) but only 2 tubes  
Drs sometimes discard unused tubes  
Lab logins specimens, not tests  
= missing tests

Specimen for EUC, LFT and CMP  
processed 3 times for each test

## Placing an Electronic Order Collection Containers

- Each orderable has associated with it, a specific collection container – eg. purple top, blue top
- Collection containers differ depending upon the test
- The collection container will be identified on the electronic request or PathNet Accession label
- Paediatric versions of collection containers exist for specific tests, For example
  - Liver Function – will request a blood collection into a full sized tube
  - Liver Function Neonatal – will also request a blood collection, but into a paediatric tube
- Some Collection Containers have anticoagulants in them, which will impact the integrity of testing if less than the required amount of blood is collected into the tube (volume dilutes blood)

**Hint:** By selecting the appropriate test this will ensure that the integrity of testing is maintained



## Placing an Electronic Order

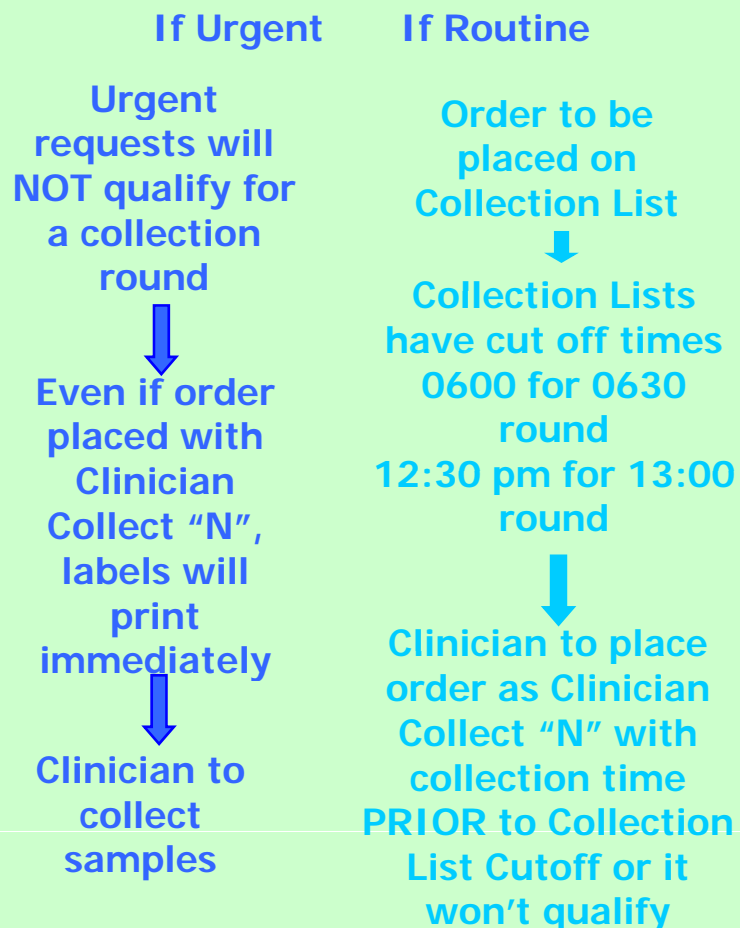
### Placing an Order

- Millennium can support:
  - Clinician Collects now – the ward collects specimens
  - Pathology Collects – on a future Collection Round by pathology Collectors
  - Frequency Orders – the same group of orders repeated at a given frequency over a defined timeframe – NOT IN SCOPE for SWAHS
  - Future Orders – a group of orders placed for collection in the future – NOT IN SCOPE for SWAHS
- If you nominate Clinician Collect “Y”, the system assumes that the specimens will be collected by ward staff.
- If you nominate Clinician Collect “N”, this will place the order onto a Pathology Collection List based on the time you have nominated for the future collection.

# Placing an Order – for pathology to collect

## Pathology to do the collection?

### Collection required



## Collection Guidelines for Pathology to Collect

### How can I be sure to get my collection onto the Collection List?

- ALWAYS place your order with a collection time in advance of the cut off time

### What happens if I miss the Collection round I want?

- If you continue to place the order as Clinician Collect "N" and want pathology to collect, it will be assigned to the next available collection round

### What if I need extra tests?

- If separate orders are placed as Clinician Collect "N" BEFORE the cut off, the system will "nett" orders automatically
- If extra orders are required AFTER the collection round cut off for next collection:

↓

Pathology Collectors HAVE NOT been -

- Complete paper "Add On" request and place in collector pigeon hole

↓

Pathology Collectors HAVE been -

- Contact lab, complete paper "Add On" request and send to lab

## Placing an Electronic Order

### Placing an Order

Question: What happens if you want to place an order tonight for a Clinician Collect for tomorrow?

- It can be done...
- You must answer Yes to Clinician Collect or else it will appear on pathology collection list
- You must enter the Collection Date/Time for tomorrow (or when you want to collect it)
- The electronic request for will still indicate "SPECIMEN COLLECTED" even though the collection date and time is for the forward time

## Placing an Electronic Order Placing a Frequency Order

Question: Can I order ahead for the same set of tests to be performed at a given frequency for a defined period of time?

- It can be done...but not in scope
- You would need to place the orders for the group of tests each time you required them

## Placing an Electronic Order

### Placing a Future Order

Question: Can I place an order for a timeframe in the future after the patient has been discharged eg. to see as an outpatient?

- It can be done...but not in scope
- You would need to place the orders for the group of tests when time you required them

## Placing an Electronic Order Labelling

- When Westmead goes live with Electronic Orders:
  - Anatomical Pathology and Cytology requests will remain as paper based request – no electronic ordering
  - Blood Bank requests will always generate an electronic paper request, as they require collection AND witness signatures with **NO** PathNet Accession Label
  - A PathNet Accession Label will print for ALL other Inpatient Orders
- Label provides legibility, collection requirements, patient demographics and tests required

## Placing an Electronic Order Requirements for Specimen Labelling

- A standardised policy for labelling has been implemented
- Labels will be placed directly onto Collection Containers (in the right location)
- LEAD LABEL MUST also be labelled with:
  - Millennium Username of Collector
  - ACTUAL Collection Date/Time
  - THIS IS AHS POLICY. There will be a grace period of 1 month, whereby, the collector will be notified of the inappropriate labelling. After the grace period has expired, failure to comply for routine samples types will qualify as rejections – need for recollection

## Guidelines for Specimen Labelling

SWAHS Policy for specimen labelling and rejection criteria

[Pathology Specimen Labelling Summary.doc](#)

[..\Tube Labelling\Final version revised\Reviewed - Millennium - SWAHS Policy - Pathology Specimen Labelling Acceptance and Rejection Policy Dec 09.DOC](#)

[..\Tube Labelling\Final version revised\Reviewed - Millennium - SWAHS Policy - Pathology Specimen Labelling Procedures Dec 09.DOC](#)



## Guidelines for Specimen Labelling

Q: What do I do if you pathology labels do not print out after placing an electronic order

A: Follow the Label Reprint Workflow

[..\FirstNet EMR Go Lives\Pathology Label Reprint Flow\\_v2.pdf](#)

## Placing an Electronic Order Cancelling Orders

For straightforward orders, 3 scenarios exist for orders

1. Ordered, Collected, Sent – Now don't want it
2. Ordered, Collected, Not sent – Now don't want it
3. Ordered, Not Collected – Now don't want it

# Placing an Electronic Order

## Ordered, Collected, Sent – Now don't want it

- Once an order has been placed electronically, it will appear in pathology on a Pending Test List in PathNet
- The test will remain there until either a specimen is received, or the test is cancelled
- If pathology receives the specimens and does not know if it is no longer required, it will be processed – once the test is in process, it cannot be cancelled.

**Hint:** Call the lab ASAP to let them know that tests have/will be received that they now don't want. These can then be cancelled by the lab if not performed yet.

## Placing an Electronic Order

### Ordered, Collected, Not sent – Now don't want it

- Orders may be placed and specimens already collected - these appear in PowerChart as ordered, but pathology doesn't have any specimens to result.
- If you decide that you do not want to continue with the order, cancel the tests on the ward and discard the specimens
- If an order is cancelled, it will not appear in the order list in PowerChart.

**Hint: Drs should ensure that once tests are cancelled, specimens are discarded and not sent to pathology, as pathology will have no way of receiving them and testing them in the system, as they will have been cancelled.**

## Placing an Electronic Order

### Ordered, Not Collected – Now don't want it

- Orders may be placed and then specimens not actually collected eg. If a patient is discharged - these appear in PowerChart as ordered, but pathology doesn't have any specimens to result.
- Specimens should always be either collected once ordered or the tests cancelled by the requesting Dr if order does not continue.

**Hint:** Cancel all orders that are no longer required. Currently, Pathology spend up many hrs per day cancelling uncollected electronic orders

## Placing an Electronic Order Choosing the Right Test - Definitions

**Orderables** – The tests that are ordered by a Clinician

**Order Catalogue** – the list of tests that appear in the Orders Tab of PowerOrders

**Primary Synonym** – The primary name by which the test is known and display name

**Direct Care Providers** – Alternative names to order the test

**Ancillary Synonym** – Alternative name to order the test for lab use only

**Order Sets** – Groups of pathology commonly ordered together

**Care Sets** – Groups of multi-clinical tests commonly ordered together  
eg. Pathology and imaging

## Placing an Electronic Order Choosing the Right Test

- There are over 2000 possible orderables.
- A standard naming convention has been implemented for all pathology orderables as part of State Base build for Pathology
- Some test names may have changed but many synonyms have been included
- Tests will appear in alphabetical order
- Tests can be found using their full name or common synonym

## Placing an Electronic Order Choosing the Right Test

- Sometimes the names of orderables start with the same name or are similar. For example LFT Body Fluid appears on the list just before LFT. Glucagon appears near Glucose.
- Drs need to ensure **the desired test** or combination of tests is selected. To assist with this, they may want to **create a "Favourites List"** of the most frequently used orders.



## Placing an Electronic Order Choosing the Right Test

- Example – Sodium
  - Sodium
  - Faeces Sodium
  - TPN Sodium
  - Sodium Level Timed
  - Urine Sodium Random
  - Urine Sodium Timed
  - Whole Blood Sodium
  - Body Fluid Sodium

**Hint:** Drs should **ALWAYS** review the tests requested in the scratchpad to ensure requests make sense ie. NOT Foetal blood Sodium on 69 yr old male!!!

## Placing an Electronic Order Choosing the Right Test

Orderable:  
sodium << searching >> ...

**Find Orderable**

Orderable :  
sodium Search

Orderable	Description
SD Sero	Streptolysin D Serology
Sod	Sodium Level
Sod T	Sodium Level Timed
SDD1 Nucleic Acid Detection	Motor Neurone Disease Nucleic Acid Detection
SDD1 PCR	Motor Neurone Disease Nucleic Acid Detection
<b>Sodium Body Fluid</b>	<b>Body Fluid Sodium</b>
Sodium Faeces	Faeces Sodium
Sodium Level	Sodium Level
Sodium Level Timed	Sodium Level Timed
Sodium Level TPN	TPN Sodium Level
Sodium Random Urine	Urine Sodium Random
Sodium Timed Urine	Urine Sodium Timed
SOL	Soluble Liver Antigens
Soluble Liver Antigens	Soluble Liver Antigens
Soluble Transferrin Receptor	Soluble Transferrin Receptor
Somat	Somatostatin Level
Somatomedin	Insulin Like Growth Factor 1
Somatomedin Timed	Insulin Like Growth Factor 1 Timed
Somatostatin Level	Somatostatin Level
Somatrophin Level	Growth Hormone Level
Sota	Sotalol Level
Sotacor Level	Sotalol Level
Sotahexal Level	Sotalol Level
Sotalol Level	Sotalol Level

## Placing an Electronic Order Using Order Sets and Care Sets

- Order Sets and Care Sets should be used to shortcut the ordering process.
- Drs should **become familiar with the use and content of "Care Sets"**.
- Order Sets and Care Sets have been designed for many Clinical Disciplines to support electronic ordering

**Hint:** Care Sets have been set up in Clinical Specialty folders to shortcut finding them

# Placing an Electronic Order Using Order Sets and Care Sets

**Test, KG**      **DOB: 25/07/2007**      **MRN: TEMP7003331**  
**Age: 12 days**      **Sex: Female**      **Loc: BL AmbulatCare ; ;**

Flowsheet   Patient Information   **Orders**   Clinical Notes   Form Browser   Task List   Patient Schedule   Documentation   Pt Status   TAA   Pathology   Medical Imaging

**PowerOrders**   Existing Orders

Orders for Signature   Rows Selected ( 0 )

**Test, KG - Add Order**   **Test, KG**   **DOB: 25/07/2007**   **MRN: TEMP7003331**

Search Results

Abdomen Angiography CT	Abscess Culture	Acid Phosphatase Body Fluid
Abdomen MRI	ACA	Acid Phosphatase Level
<b>Abdomen Pain</b>	Acanthamoeba Culture	Acid Phosphatase Level Tartrate Re.
Abdomen US	ACE CSF	Acid Phosphatase Prostatic
Abdomen Xray	ACE Level	Acidification Urine
Abdominal Aorta US	Acetoacetate Quantitation	ACL
Abdominal Pain Virus Screen	Acetone Quantitation	ACP Level
Abdominal Wall US	Acetylcholine Receptor Antibodies	ΔCP Level Tartrate Resistant
Abelson Gene Rearrangement	Acetylcholinesterase	ACP Prostatic
Abelson Gene Rearrangement Quan...	Acetylcholinesterase Amniotic Fluid	Acromioclavicular Joint L Xray
ABG	Acetylsalicylate Level	Acromioclavicular Joint R Xray
ABL PCR	Acid Glycerol Lysis Test	ACTH Level
Abortion	Acid Maltase	ACTH Level Timed

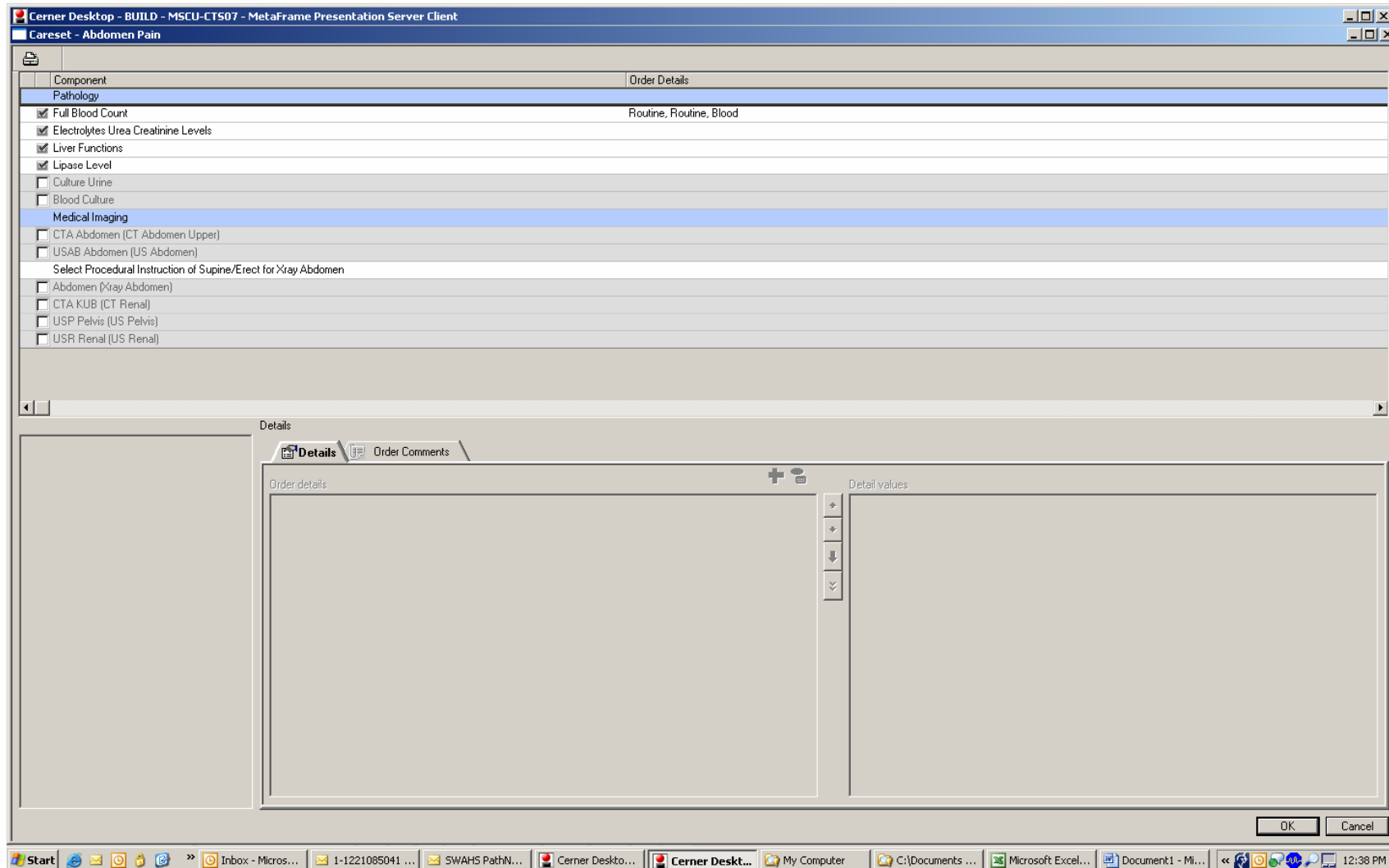
Test, KG - TEMP7003331   Done

Draw, 07/28/07 11:55:00, Blood, BLK Laboratory, 633211.000000
Draw, 07/28/07 11:55:00, Blood, BLK Laboratory, 633211.000000
Draw, Blood, BMH Laboratory
Biopsy Punch, Abdo, BMH Laboratory
Venous Draw, Blood, BLK Laboratory, Print Label By Order Location
Venous Draw, Blood, BLK Laboratory, 75 g, Print Label By Order Location
Draw, 08/02/07 11:16:00, Blood, BLK Laboratory, WMPT04_VMS, 1 mL
Draw, 08/02/07 11:16:00, Blood, BLK Laboratory, WMPT04_VMS
Draw, 08/02/07 11:16:00, Blood, BLK Laboratory, WMPT04_VMS
Electrolytes Urea Creatinine Levels
APTT Mixing Studies
Prothrombin Time Mixing Studies
_Glucose 120min
_Glucose 0min
C Reactive Protein
Cortisol Level Stimul. Synacthen
Electrolytes Urea Creatinine Levels
APTT Mixing Studies
Prothrombin Time Mixing Studies
_Glucose 120min
_Glucose 0min
Full Blood Count
Full Blood Count and Film

SWTST | KC9052 | 06 August 2007 | 12:31

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# Placing an Electronic Order Using Order Sets and Care Sets



## Placing an Electronic Order Duplicate Orders

- When Drs start to use electronic ordering, inadvertently, they may order duplicate tests.
- **Two forms of duplicate checking have been set up:**
- *Duplicate checking on the same order* - If an order is placed where 2 of the same tests are mistakenly ordered at the **exactly** the same time, one of the orders will automatically be rejected.
- *Duplicate checking within 24 hrs* - If an order is placed and a repeat order placed for the same test within a 24 hr period, a warning will be posted to the screen which will give the user the option to either accept the repeat order, or remove it.

**Hint:** Drs should review the scratchpad before signing the order to ensure that they have not placed the same order twice, unless required with different collection parameters eg.  
Cancelled tests will appear in PowerChart!!!

# Western Pathology Cluster

## PathNet Millennium Implementation



## Tracking the Progress of the Specimen

### Finding if an Order has already been placed

- When tests are ordered but not resulted by pathology yet, they will remain in the “Orders” Tab.
- Once tests have been completed in pathology (verified), they will then appear in the Flowsheet

Hint: Check the status of orders in the **Orders** tabs **FIRST** and results in the **Flowsheet**.



# Viewing Results after PathNet Cerner Millennium implementation

## Flowsheet

- Displays only RESULTS
- Double click on cell to view Report
- No hardcopy Reports (available in PowerChart)

Results	08/10/2009 15:10	08/10/2009 15:04	08/10/2009 15:02
<b>Blood Chemistries</b>			
<input type="checkbox"/> Sodium Level			
<b>Haematology</b>			
<input type="checkbox"/> ESR			
<b>Coagulation Studies</b>			
<input type="checkbox"/> APTT			
<b>Microorganism Investigation</b>			
<b>Culture Wound</b>	RESULTS	RESULTS	RESULTS
<b>Radiology</b>			



CULTURE WOUND - Accession: 000072009281000005

Micro Reports	Specimen	Action List
CORRECTED REPORT		- 08 October 2009 15:25 -
Normal flora		
FINAL REPORT		- 08 October 2009 15:21 -
Normal flora		
PRELIMINARY REPORT		- 08 October 2009 15:21 -
No growth at 24 hours Culture in progress		
GRAM STAIN		- 08 October 2009 15:21 -
No organisms seen		

## Orders Tab

- Displays status change when test is ordered
- Status change will reflect Lab processes
- Click on Order name or R click to view results when "Completed"

Flowsheet	Patient Information	Orders	Clinical Notes	Form Browser	Task Li
+ Add					
Display: All Orders (All Statuses)					
Order Name	Status	Details			
Full Blood Count	Discontinued				
Glycosylated Hb A1c	Cancelled	Collected Y/N, RT - Routine, R			
Hepatitis B Surface Antigens	Completed	Collected Y/N, RT - Routine, R			
Hepatitis C Serology	Completed	Collected Y/N, RT - Routine, R			
Hepatitis C Serology	Completed	Collected Y/N, RT - Routine, R			



**TEST, BI** Age: 44 years Sex: Male  
DOB: 12/12/1... MRN: TE

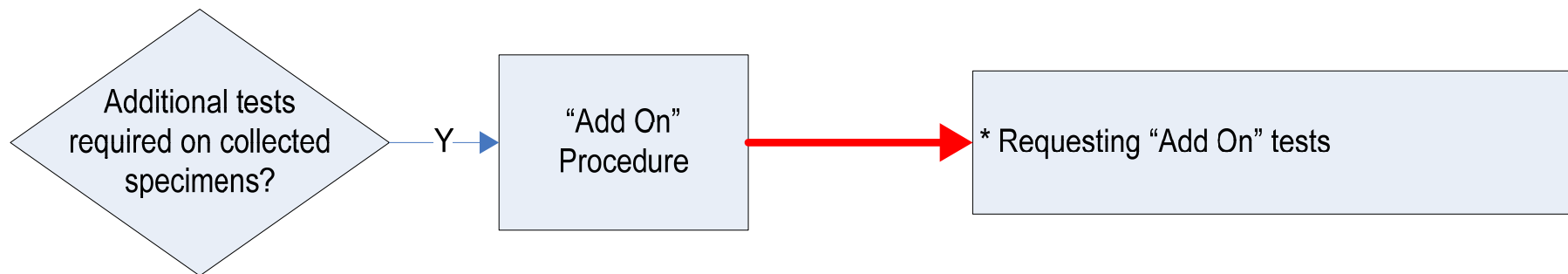
Original order entered by Bishop, Mark on 11/09/2009 at 01:34.  
Written order by UNK, DR  
Laboratory Department

**Hepatitis B Surface Antigens**

Details	History	Comments	Additional Info	Results	Final
Order Activity Flowsheet 11/09/20 09 01:34					
HepBsAg					
HBs Ag				Not Detect	

## Status Changes after PathNet Cerner Millennium implementation

Laboratory Category	PowerOrders Display Status	Description
<b>General Lab</b> <i>Clinician Collect "Yes"</i>	<b>Ordered Dispatched</b>	Order is placed in eMR. Not received by Lab
	<b>Ordered (In-Lab)</b>	Specimen received by testing Lab
	<b>Ordered (In-Transit)</b>	Specimen with courier. Not received by testing Lab
	<b>Collected</b>	Specimen received by Lab
<b>Collected by Pathology</b> <i>Clinician Collect "No"</i>	<b>On-Hold</b>	Order on PathNet collection list but specimen not collected (eg. Pt not fasting) for recollection
	<b>Scheduled</b>	Order on PathNet collection list, not collected
	<b>In-Process</b>	Some results available but not complete
	<b>Completed</b>	All results available in PowerChart
	<b>Cancelled</b>	Order cancelled by Lab
	<b>Discontinued</b>	Order cancelled by Doctor in PowerChart
<b>Microbiology</b>	<b>Steps:</b>	
Culture Wound (Wound Swab) Ordered (Dispatched)	<b>Ordered Dispatched</b>	- Order is placed in eMR. Not received by Lab
Culture Wound (Wound Swab) Ordered (In-Lab)	<b>Ordered (In-Lab)</b>	- Specimen received by testing Lab
Culture Wound (Wound Swab) InProcess (Stain)	<b>InProcess (Stain)</b>	- Specimen is being processed
Culture Wound (Wound Swab) InProcess (Final)	<b>InProcess (Susceptible)</b>	- Specimen is being processed
Culture Wound (Wound Swab) InProcess (Susceptibility)	<b>InProcess (Final)</b>	- Specimen is resulted but some results still pending
Culture Wound (Wound Swab) Completed	<b>Completed</b>	- All results available in PowerChart



## Adding Additional Tests to a Collected Specimen

### “Add On” Requests

- In certain circumstances, additional testing on the collected blood sample may be required. This constitutes an "Add On" order.
- Different procedures exist depending upon whether the specimens and request are still on the ward, or they have already been sent to the lab
- When wanting to add on a test to already collected specimens, you must ensure that the collection containers are appropriate for the “Add On’ test required.

Specimen is still in the Ward – Add-On Tests Required

Specimen is sent to the Lab – Add-On Tests Required

**Specimen still on Ward  
Additional Test now required**

**Clinician to determine if appropriate/sufficient specimen for additional test(s)**

**If sufficient**



**Clinician to complete paper request form for "Add on" test only, mark form clearly as "Add on" and send with Barcoded specimens**



**Lab staff to enter additional test into PathNet system**

**If insufficient**



**Clinician to place NEW Order into PowerChart as Clinician Collect "Y"**



**Clinician to collect new sample**

**Specimen is sent to Lab  
Additional Test now required**

**Clinician to phone Lab ASAP to request Add-On to current Orders**

**Lab staff to assess sample**

**If sufficient**



**Lab staff to enter additional test into PathNet system**



**Clinician to complete paper request form for "Add on" test only, mark form clearly as "Add on" and send to Lab**

**If insufficient**



**Clinician to place NEW Order into PowerChart as Clinician Collect "Y"**



**Clinician to collect new sample**

# Western Pathology Cluster

## PathNet Millennium Implementation

Results available  
in PowerChart



\* Accessing Results in PowerChart

## Reviewing Results

### Finding if a Result in PowerChart

- Once tests have been completed in pathology (verified), they will appear in the Flowsheet
- Use the navigator bar to help locate the tests you want more quickly

**Hint:** Additional information about the test can be found by double clicking on the result eg. for reference ranges etc...

# Reviewing Results

## Finding if a Result in PowerChart

TESTPATIENT, ICU - 2513X9000031 Opened by Robinson, Tony

Task Edit View Time Scale Options Help

As Of 9:52 AM

**TESTPATIENT, ICU** Age: 45 years Sex: Male Location: Historical  
DOB: 18/02/1963 MRN: 2513X9000031 Fin Number:

Flowsheet Patient Information Orders Clinical Notes Form Browser Existing Orders Problems and Diagnoses

Flowsheet: All Results Flowsheet Level: ALLRESLTSECT Table Group List

Last 200 Results

Results	7/08/2008 1:18 PM	23/07/2008 1:09 PM	8/07/2008 2:56 PM	7/07/2008 10:12 AM	2/07/2008 7:46 AM	1/07/2008 8:10 AM	24/06/2008 8:36 AM	24/06/2008 8:08 AM	28/04/2008 9:42 AM
<b>Blood Gas</b>									
Gas Specimen									
<b>Blood Chemistries</b>									
Sodium Level		136		139					
Potassium Level				3.2					
Chloride Level				101					
CO2 Level				29					
Urea Level				4.0					
Creatinine Level				150 H					
Anion gap				12					
eGFR				47 L					
Total Bilirubin									
Serum Protein									
Albumin									
Tot Globulin									
ALT									
AST									
GGT									
Alkaline Phosphatase Level									
Creatine Kinase Level									
Calcium Level									
Calcium Level Corrected									
Magnesium Level									
Phosphate Level									
Fasting Glucose Level									
Zinc Level									
Urate									
Copper									
GTT Oral Glucose dose									

PROD R22400642 August 22, 2008 9:52 AM



# Reviewing Results

## Finding if a Result in PowerChart

TESTPATIENT, ICU - 2513X9000031 Opened by Robinson, Tony

Task Edit View Time Scale Options Help

**Result Details - TESTPATIENT, ICU - Electrolytes Urea Crea...**

Result History

Value	Valid From	Valid Until
150	7/07/2008 10:15 AM	Current

Result | Specimen | Action List

**Creatinine 150 umol/L (HI)**  
 Normal Low **60** Normal High **120**  
 Critical Low Critical High **>400**  
 Date/Time **July 07, 2008 10:12 AM**  
 Contributor System **PowerChart**  
 Accession Number **000402008189000363**  
 Service Resource **COO Vitros**  
 Status **Auth (Verified)**

626280413 More History Forward... Print... Close

7/07/2008 10:12 AM Creatinine: 150 umol/L (HI) (Auth (Verified)) (Ref. Range 60 - 120)

PROD | R22400642 | August 22, 2008 | 9:53 AM

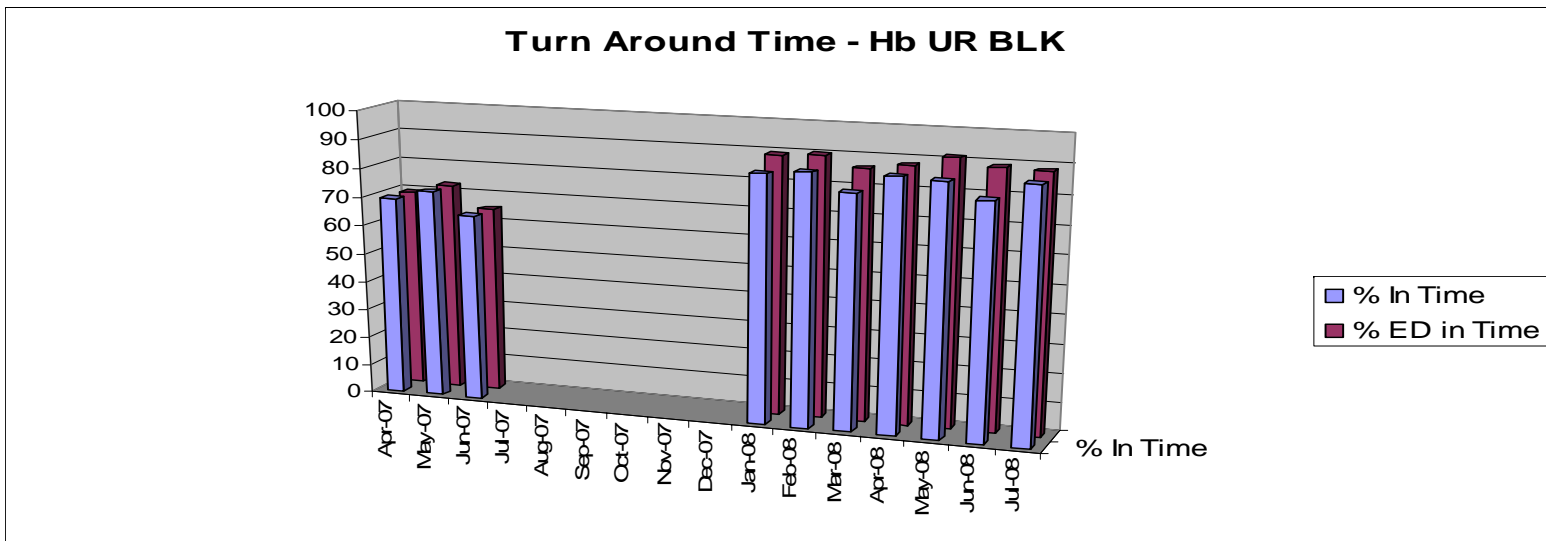
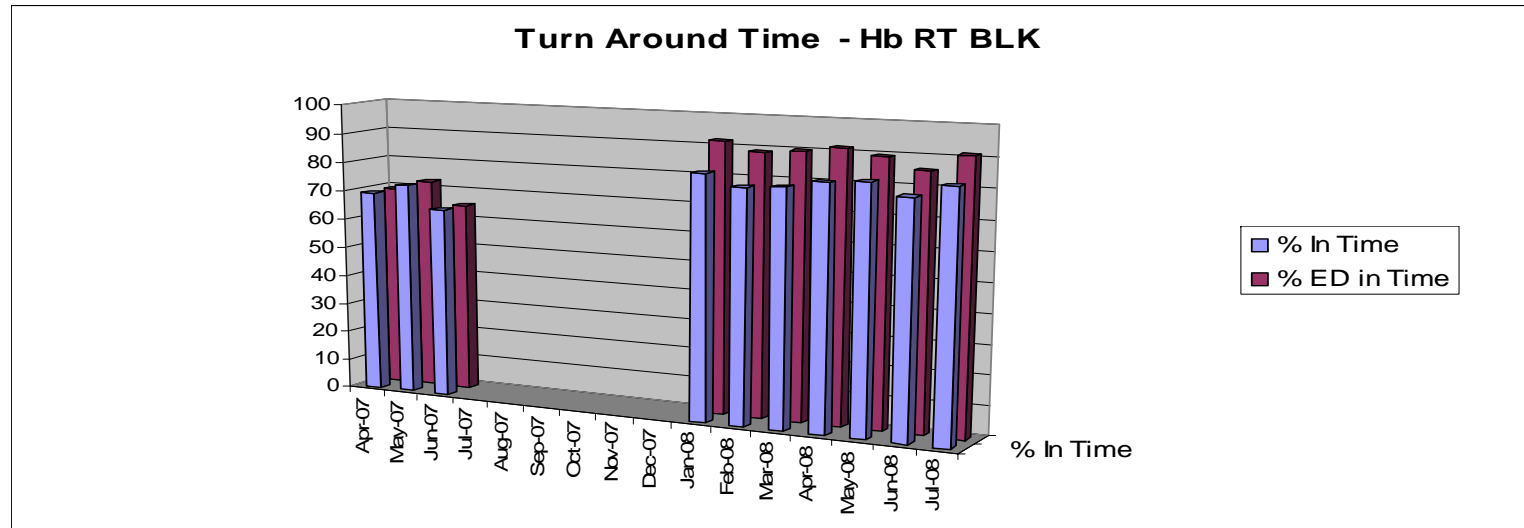
## Managing in Downtime

- **Paper request forms** - Complete the appropriate paper request form and place in the collection bag with the specimen. Continue normal processes for collection.
- **Add ons** - continue to ring the lab and send or fax the request form to the lab.
- **Critical results** - will continue to be phoned directly through to the clinicians by the lab staff.
- **Non-urgent requests** - Where possible non-urgent request are to be held until system/s are reactivated.
- **Routine results ordered DURING downtime** - clinicians need to ring the lab BUT only if necessary as lab staff are also working to downtime.
- **Routine results ordered PRIOR to downtime** - Lab staff are unable to access results for electronically placed tests ordered prior to downtime.
- **Completing specimen labels** - clearly hand write the relevant information on the tube label.
- **Orders manually placed during downtime** do NOT have to be reordered or entered in Cerner when the system is reactivated.

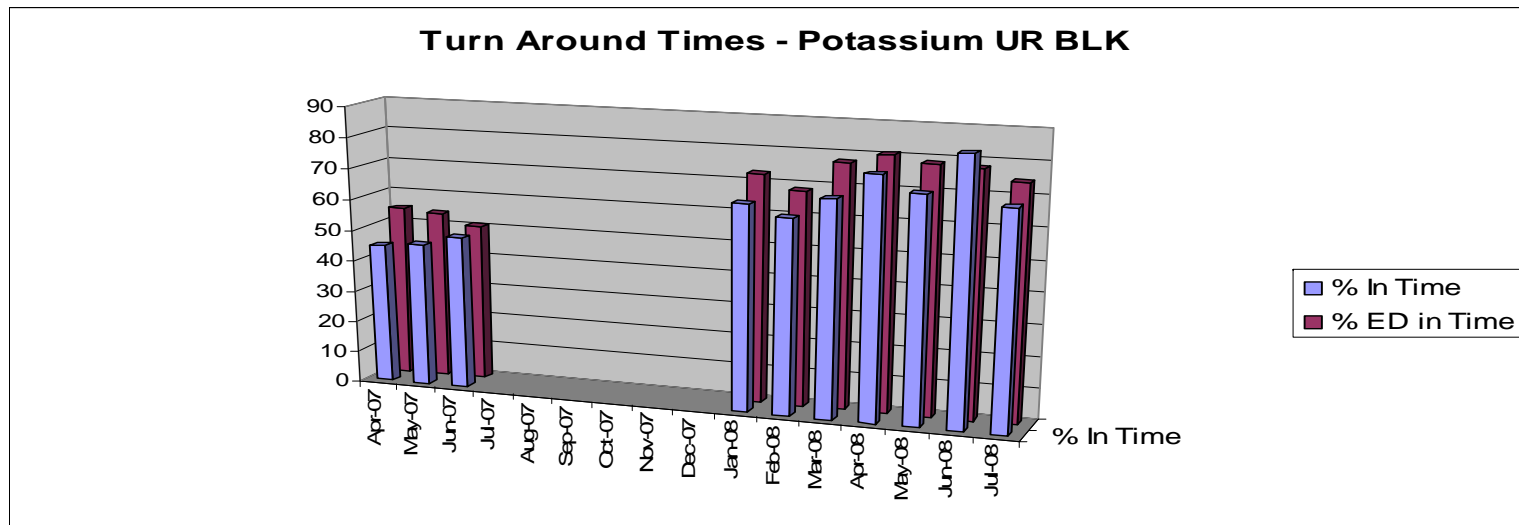
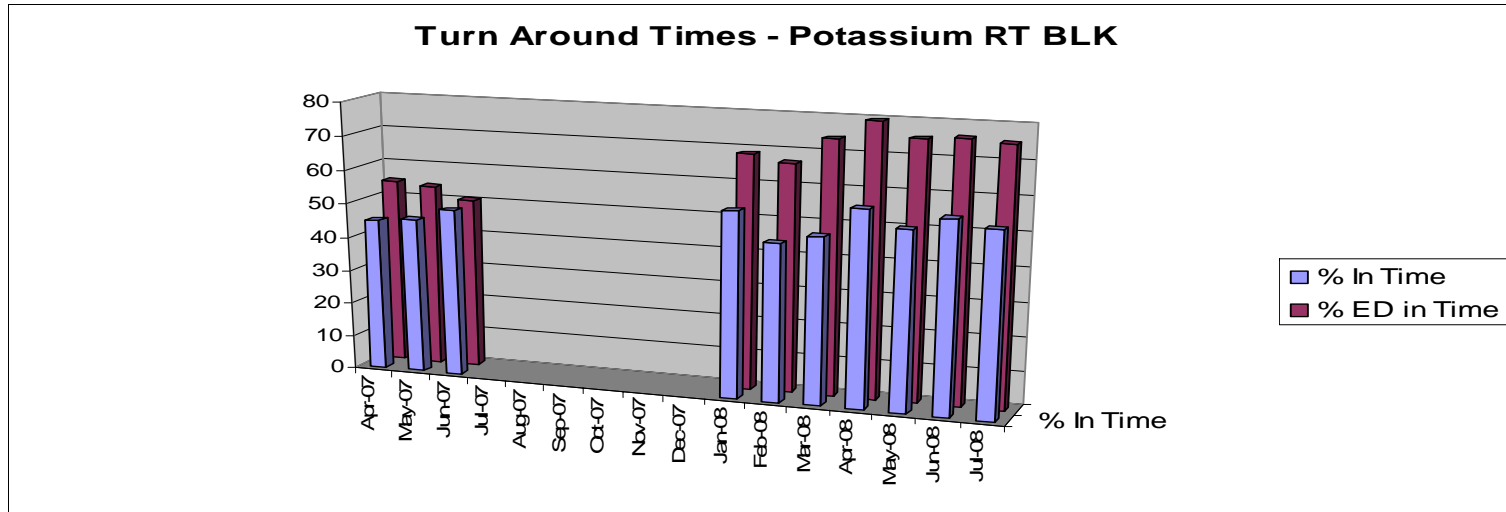
## Does Electronic Ordering have any benefit?

- Increased legibility of requests
- Increased compliance with providing additional information eg. anticoagulant therapy
- Improved TAT of tests, especially when coupled with PathNet Millennium in the lab

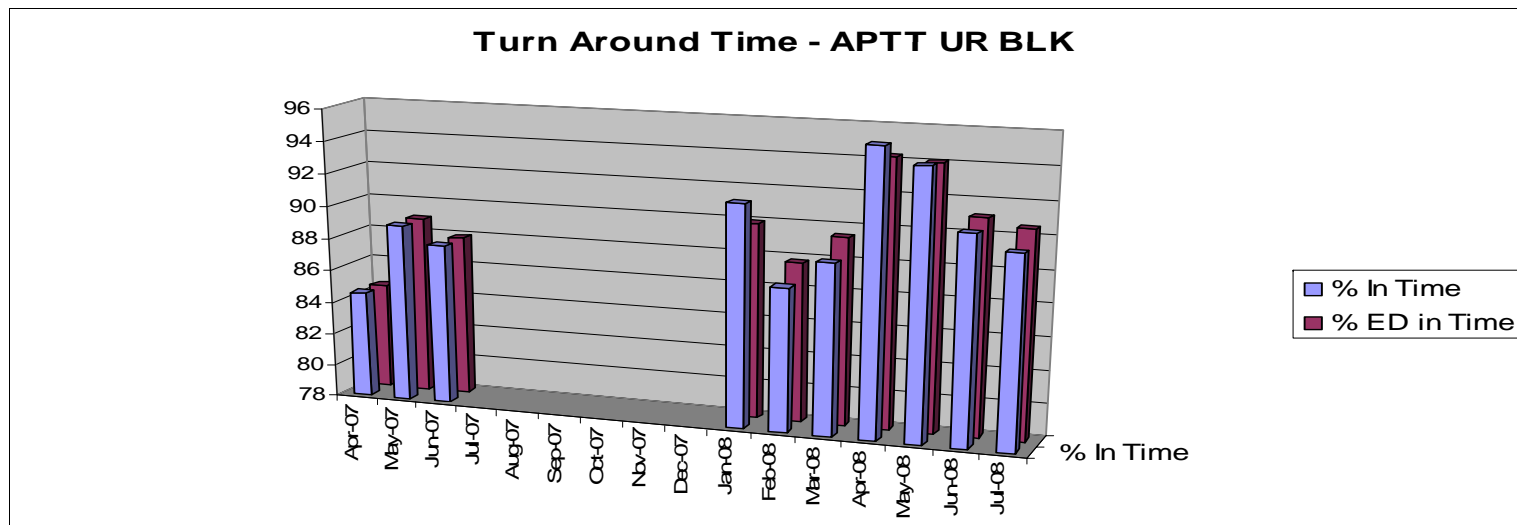
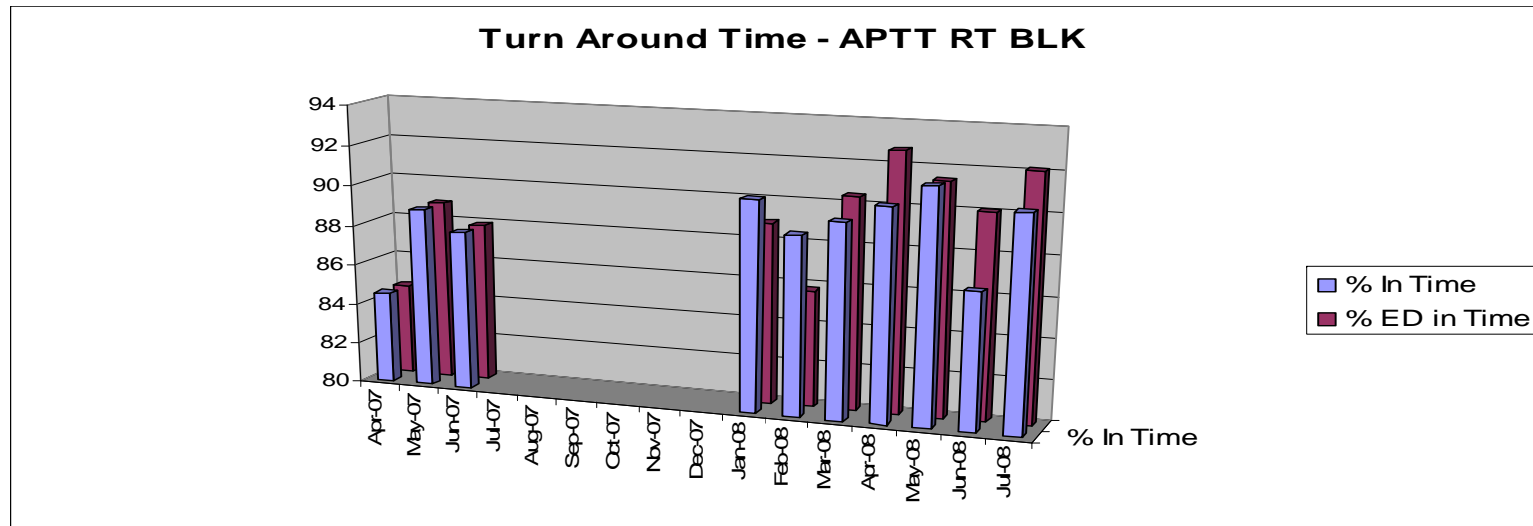
## Impact of Electronic Orders on TAT - Hb



## Impact of Electronic Orders on TAT - K



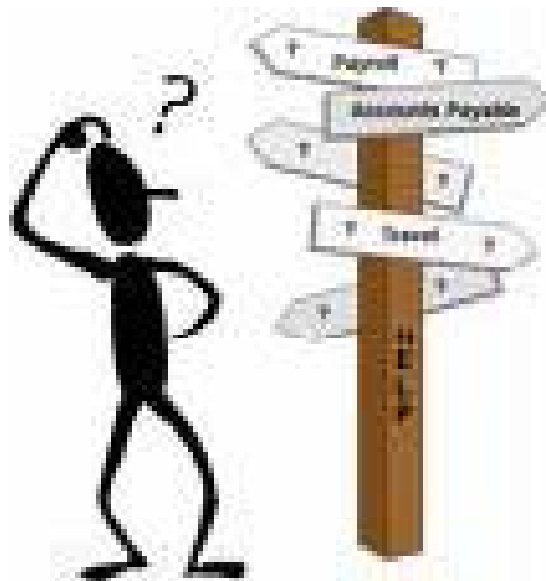
## Impact of Electronic Orders on TAT - APTT



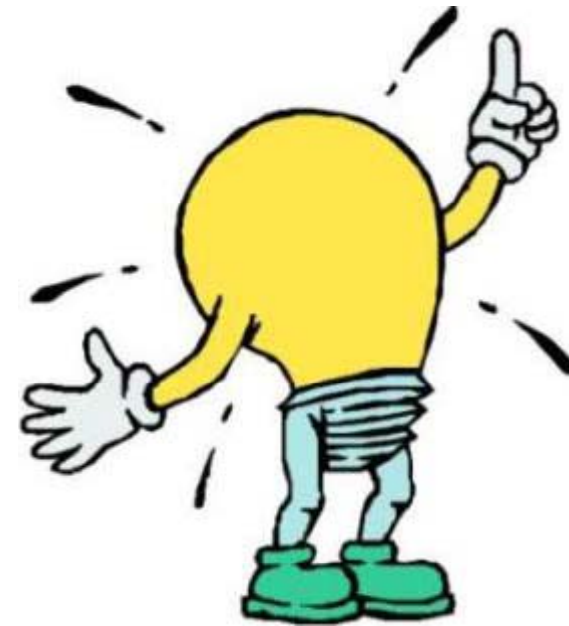
## Ordering Blood Products on Line

- Will not be present at go live for electronic orders
- Is planned to be implemented once pathology has gone live with PathNet Millennium Blood Bank
- Specifications have been defined
- Prototype built in test environment

## Questions and Discussion



OR





## Pathology Test Naming Conventions

**Rule:** Blood Specimens

**Description:**

All tests performed on venous blood samples will NOT have blood in the test name. This includes Red Cell, Plasma and Serum specimens unless it is required to differentiate the test - then it will appear before the test name. Where there exists a very well known name of test then the primary test will be known by this name and the synonym will be according to this rule

**Example:**

Liver Function – assume blood

Red Cell Cholinesterase – differentiates from other  
“Cholinesterases”

Blood Group (rather than Group); Blood Culture (rather than Culture)

## Pathology Test Naming Conventions

**Rule:** Specimen Types

**Description:**

All tests on identified non-blood specimens will include the specimen type in the test name. It will appear first in the name.

**Example:**

Urine Culture

CSF Glucose

Faeces Porphyrins

Urine Catecholamines

## Pathology Test Naming Conventions

Specimen Type Prefix	Specimen Type Prefix
Urine	Red Cell
Faeces	Scalp Vein
CSF	Tissue
Amniotic Fluid	TPN
Arterial Blood Gas	Whole Blood
Foetal Blood	Body Fluid
Bone Marrow	Cord Blood
Semen	Meconium
Dialysis Fluid	Dried Blood Spot

**Rule: Specimen Types prefixes test name for other than Blood**

## Pathology Test Naming Conventions

**Rule:** Abbreviations

**Description:**

Abbreviations will only be used mainly as synonyms and only very common abbreviations to be included.

**Example:**

Primary Synonym: Full Blood Count

Synonym: FBC

Other common Abbreviations:

UEC, LFT, TSH, FT4

## Pathology Test Naming Conventions

**Rule:** Synonyms

**Description:**

Synonyms will be created for tests as appropriate to facilitate searching for the correct orderable. Synonyms will be created most commonly in the format of reverse naming, key words first, and common abbreviations.

**Example:**

Primary Mnemonic: Culture Urine

Synonym: Urine Culture

Primary Mnemonic: Full Blood Count

Synonym: FBC

**Hint:** The Dr may use a synonym to order the test, however the scratchpad will display the “Primary Synonym” only

## Pathology Test Naming Conventions

**Rule:** Cultures

**Description:**

All cultures will be named with the word 'Culture' followed by any additional qualifying information such as site or specimen. All viral cultures will be named with the words 'Virus Culture' followed by any additional qualifying information such as site or specimen. The only exception will be Blood Culture, which will be listed as Blood Culture with a synonym of Culture Blood according to this rule.

**Example:**

Virus Culture Faeces, Virus Culture HIV  
Culture Bordetella pertussis, Culture Eye

## Pathology Test Naming Conventions

**Rule:** Serology

**Description:**

Serology tests will be named according to the infectious agent. If applicable the infectious agent will be followed by 'Antibodies', 'Antigens', 'Serology' or 'Serotyping'. Serology will mean either quantitative testing or qualitative testing or a combination of both depending on the service provided. Serotyping will be used in the case of identifying the genotype of an organism as defined by antisera against specific surface antigens. For serology tests performed via PCR the words 'Nucleic Acid Detection' will appear after the name of the infectious agent.

**Example:**

Herpes simplex Virus Antibodies

Herpes simplex Virus Antigens

Herpes simplex Virus Nucleic Acid Detection

Salmonella Serotyping

## Pathology Test Naming Conventions

**Rule:** Drugs

**Description:**

All individual drugs will include the drug name followed by the word 'Level' to differentiate these from medication orders that may be in the same order catalogue. Where no qualifier is provided a Total assay will be assumed. A full drug screen will be known as the Specimen followed by the words 'Drug Screen' according to rules 9 and 10.

**Example:**

Medication Order: Digoxin

Drug Test: Digoxin Level

Urine Drug Screen



## Pathology Test Naming Conventions

**Rule:** Children

**Description:**

Tests performed on babies will be named with the test name followed by 'neonatal' *if required* to differentiate the type of test performed. Tests performed on samples for children will be named with the test name followed by 'paediatric' *if required* to differentiate the type of test performed.

**Example:**

Liver Function Neonatal

## Pathology Test Naming Conventions

**Rule:** Fasting

**Description:**

Tests performed on patients who have fasted will be named with the test name, if required followed by 'Fasting'

**Example:**

Glucose Fasting

Cholesterol Fasting

## Pathology Test Naming Conventions

**Rule:** Peak and Trough

**Description:**

For drug levels taken at Peak or Trough times the words 'Peak' and 'Trough' may be added to the end of the test name if required.

**Example:**

Gentamicin Level Peak or Gentamicin Level

## Pathology Test Naming Conventions

**Rule:** Allergies

**Description:**

Allergy testing will be named 'Allergy Test' followed by the category of allergen (according to Standard). All allergies will have a synonym of 'RAST' followed by the category of allergen.

**Example:**

Primary Synonym: Allergy Test Insects  
Synonym: RAST Insects

## Pathology Test Naming Conventions

**Rule:** Anti's

**Description:**

A test that includes ANTI as part of the name will be included as part of the name, but those tests where ANTI is a prefix, anti will only appear in the synonym but NOT as part of the primary synonym.

**Example:**

Cardiolipin Antibodies      Syn: Anti Cardiolipin Antibodies  
Antithrombin III

## Pathology Test Naming Conventions

**Rule:** Timed Stimulation/Suppression Tests

**Description:**

All tests which are performed over time after the administration of a stimulating/suppressing compound will be named primarily as stimulating compound followed by 'stimulation/suppression test'. Synonyms will be created with the test followed by 'timed' followed by the type of stimulating/suppressing compound. Where there is no stimulating/suppressing compound the test will be named as the test name followed by 'timed'. Where there exists a very well known name of test then the primary test will be known by this name and the synonym will be according to this rule eg GTT

**Example:**

Primary Synonym: Synacthen Stimulation Test

Synonym: Cortisol Timed with Synacthen

Primary Synonym: Luteinizing Hormone Timed

Primary Synonym: Glucose Tolerance Test

## Pathology Test Naming Conventions

**Rule:** Genetic testing

**Description:**

Genetic testing looking for detection of DNA or RNA by PCR will be referred to as the test name followed by 'Nucleic Acid Detection', NAD will be used as a synonym. Genetic testing which is detecting a mutant or wild type gene will be referred to as the test name followed by 'Genotyping'.

**Example:**

Factor V Leiden Genotyping.

Acid Fast Bacilli Nucleic Acid Detection

## Pathology Test Naming Conventions

**Rule:** Qualitative versus Quantitative

**Description:**

Where a test can be performed both qualitatively and quantitatively, 'Screen' will be used to indicate a qualitative test (presence or absence of substance). 'Assay' will be used to indicate a quantitative analysis (specific amount of the substance) including titres.

**Example:**

Heparin Assay

Glucose 6 Phosphate Dehydrogenase Screen

Glucose 6 Phosphate Dehydrogenase Assay



## Pathology Test Naming Conventions

**Rule:** Metals

**Description:**

Metals will have a primary synonym as the full word and the scientific abbreviation as the synonym.

**Example:**

Primary Synonym: Silver

Synonym: Ag

Primary Synonym: Copper

Synonym: Cu

## Pathology Test Naming Conventions

**Rule:** Vitamins

**Description:**

All tests for vitamins will have the word 'Vitamin' followed by the type as the primary synonym. The chemical name will be used as a synonym.

**Example:**

Primary Synonym: Vitamin C

Synonym: Ascorbate

## Tips for specific pathology orders

- Microbiology Orders and Wound Cultures
- Blood Gases performed on the ward
- Hepatitis Ordering
- Respiratory Virus Screens
- Cholesterol and Triglycerides
- Iron tests
- Vitamin B12 and Folates
- Crossmatching
- Timed Studies

## Tips for Specific Pathology Orders Microbiology Orders and Wound Cultures

- There are now be only two orderables for wound swabs in Millennium :
  - Culture Wound Operative (C WS Op) – swabs from Operating Theatres.
  - Culture Wound (C Wound) – all other wound swabs.
- This strategy has been taken in order to reduce the uncertainty of which orderable to choose.
- Please Note: For those with Electronic Ordering in the wards, doctors will still be able to order “Deep” or “Superficial” wound cultures, however both of these will now be synonyms for Culture Wound.

**Hint: The Specimen type is required as it drives media selection for growth of micro-organisms**

## Tips for Specific Pathology Orders

### Blood Gases performed in the ward

- Some wards have their own Blood Gas Analysers that are not linked to Pathology
- If performing the ABG in the ward, and it is NOT part of the Pathology Blood gas Network, this should NOT have an electronic order placed.
- If the ABG is to be performed by pathology, an electronic order should be placed and ABG forwarded to pathology for testing
- Part of Pathology system – Blood Gas machines at WMD ICU and Op Suite only

**Hint:** Only Order a Blood Gas if you intend to send it to Pathology for testing or you have a linked Blood Gas Analyser

## Tips for Specific Pathology Orders Hepatitis Ordering

- There are several options for ordering Hepatitis tests:
  - **When you know what you want** – all individual hepatitis orderables exist in the order catalogue
  - **When you are investigating a specific clinical scenario** – Order Sets have been designed to define the correct hepatitis tests relevant to a given clinical scenario
  - **When you don't know what you want specifically** – An orderable called "Hepatitis Screen" exists; in this case, the lab will determine the most appropriate tests given the clinical information supplied; Dr needs to include detailed info in clinical notes, so the lab can figure it out, otherwise they will have to call the Dr, or alternatively wrong tests may be performed

**Hint:** If the Dr isn't sure of the most appropriate hepatitis test to order, order the "Hepatitis Screen", with relevant clinical information and the lab will determine the most appropriate tests

## Tips for Specific Pathology Orders Cholesterol and Triglycerides

- There are 2 types of Chols and Trigs– Fasting and Non-fasting
- **If Fasting – request Lipid Level Fasting**
  - includes Fasting Cholesterol, Triglyceride, HDL and LDL (so no need to order these separately)
  - The lab will not do HDL unless fasting
- **If Random – request Random version of the tests required**
  - can order Cholesterol and Triglyceride random as a group, will do both
  - Can order Cholesterol Random or Triglyceride Random
  - Only the specific order placed will be tested

## Tips for Specific Pathology Orders Iron Tests

- Iron level
  - orders just Iron level,
  - used to investigate cases of iron Overload
- Iron Studies
  - orders Iron Level, Ferritin, Transferrin, Transferring Saturation
  - used to investigate anaemia



## Tips for Specific Pathology Orders

### Vitamin B12 and Folate Studies

- It is recommended when investigating B12 or Folate deficiency, that Vitamin B12, Serum Folate and Red Cell Folate are tested
- Serum Folate orders alone has no clinical significance, the order will be cancelled by the lab (with cancellation explanation), as it should be performed with a Red Cell Folate
- Serum Folate and Vitamin B12 without a Red Cell folate – Serum Folate has no clinical significance, the order will be cancelled by the lab (with cancellation explanation), as it should be performed with a Red Cell Folate
- Red Cell Folate alone – in order to calculate the red cell folate, a serum Folate is also required; the lab will cancel the Red cell Folate (with cancellation explanation).

**Hint:** Orderable “Vitamin B12 and Folate Studies” will request all 3 automatically

## Tips for Specific Pathology Orders Crossmatching

- Electronic Orders cannot currently be placed for Crossmatching
- Current practice is to order a Blood Group and Antibody Screen
- The Screen remains valid for 72hrs
- If blood is required, request must be made directly through the Blood Bank and criteria met for transfusion in accordance with ASBT guidelines
- Assuming clear G&S, a computer crossmatch is undertaken and blood is guaranteed in 10mins from order
- Blood Bank do not "Group and Hold Blood"

# Tips for Specific Pathology Orders

## Timed Studies

- Only three orders will be ordered electronically for timed studies. These are:
  - Cortisol Level Stimulation with Synacthen (ICU only)
  - 17 Hydroxyprogesterone Stim with Synacthen (ICU only)
  - Inferior Petrosal Sinus Sampling (Endo specialist)
- All other timed studies are done as outpatient requests through the Endo clinics – paper requests
- Placing a Timed Study via electronic order involves:
  - Selecting order
  - Select Collect Y
  - Enter collection time:
    - **NOTE: Enter the collection time for the Zero orders only.** The system will assign the collection time for the other orders.
  - Sign off the order.
  - **NOTE: A separate accession number will be assigned for the different collection times.**
- Collect the specimens at the requested time noting the actual collection time on the specimen.
- Send specimens to laboratory individually or all together on completion.
- Laboratory will enter collection times as per time written on tube.
- Specimens will be assayed as per protocol in the lab.